

1877—15th August, from eggs of *umbrosa* in confinement. Result about 22nd September—2 *umbrosa*, 9 *Fabricii*.

1870—1st August, found larvæ. Result 13th September—6 *umbrosa*, 16 *Fabricii*.

FOURTH BROOD :

1872—10th October, found larvæ past third moult. Result 8th to 18th December—4 *Fabricii*.

MICRO-LEPIDOPTERA.

BY V. T. CHAMBERS, COVINGTON, KY.

TORTRICINA.

It is not my purpose to enter upon the difficult field of this family. My acquaintance with the literature of the subject, and with the characters of the multitude of very unnatural genera into which it has been in modern times divided, is too limited to justify me in so doing ; the more especially as Prof. Fernald is now working it up. But the two species mentioned below are sufficiently interesting to induce me to publish the following observation upon them.

EXARTEMA, Clem.

E. fagigemmacæana, n. sp.

A single specimen of this species is in the Museum at Cambridge, labelled *Coleotechnites fagigemmacæana*, by which name it stood in my cabinet before it was recognized as an *Exartema*. Prof. Fernald having examined it, informs me that it is a true *Exartema*, which genus, though withdrawn by Dr. Clemens, is retained by Zeller.

Palpi ochreous, with terminal joint brown, and with two small brown spots on the outer and one on the inner surface of the second joint. Head ochreous, with a dark brown line across the vertex between the antennæ ; eyes green ; thorax ochreous, stained with fuscous on the dorsal surface ; fore wings from the base to beyond the middle sordid olive green, the

remaining portion brick red, both portions being marked with silvery gray or silvery white, according to the light, and the basal third entirely suffused or overlaid with the silvery hue, except three spots, one of which is just within the dorsal margin, another oblong larger one is within the costal margin and a much larger elliptical one is on the fold. From the silvery part of the wing, at about the middle of the disc, a silvery streak curves obliquely backwards to the brick red color at the fold, where it intersects another silvery streak, which leaves the dorsal margin before the ciliae (at the junction of the olive green and brick red) and curves obliquely backwards to a point in the middle of the apical part of the wing, where it intersects still another silvery streak, which leaves the apical margin near the hinder angle and curves obliquely forwards to a point within the costal margin at the junction of the olive green and brick red colors. On the costal margin, and opposite to the end of the last mentioned streak, is a small ochreous spot, and in it begins another silvery streak which curves obliquely backwards to the apical margin before the apex, running nearly parallel to the last above-mentioned silvery streak, and being intersected by a small costal silvery streak which also arises from a small costal ochreous spot; further back are two other small costal ochreous spots, each of which contains a small black line. Ciliae dark bluish brown, with two ochreous spots *beneath* the apex, and a dark brown hinder marginal line at the base, before which is an indistinct line of black atoms. From about the basal third of the wing length to the apex the *extreme* costa is dark brown interrupted by ochreous spots, and the basal third is ochreous interrupted by three or four dark brown spots. Thus the basal half of the wing is olive green suffused with silvery, except upon the three spots before mentioned, while the apical half is brick red divided by anastomosing silvery lines. Under a lens the silvery parts of the wing appear to be dusted with brown.

The hind wings are fuscous, pale at the base, deepening towards the apex. Ciliae yellowish silvery with a dark brown hinder marginal line at the base. Abdomen dark brown above, ochreous below. Legs ochreous, the first pair dark brown on their anterior surfaces, and the tibiae of the hind pair fuscous on their anterior surfaces; tarsi dark brown on the outer surface, annulate with fuscous. *Al. ex.*, ♂, $9\frac{1}{2}$ lines; ♀, 8 lines. Kentucky.

This insect is chiefly interesting from its larval habits. I have known the larva long, and it is mentioned, I believe, in a previous paper in the

CAN. ENT. It is sordid yellowish white, with the head piceous and the next segment stained with fuscous. It feeds inside the leaf buds of the beech (*Fagus sylvatica*), and when it has well eaten out the contents of one bud, it cuts it off at the base, and using it as a case, travels off to another bud, to the apex of which it affixes its case and proceeds to eat out this bud also, and then cuts it off, as it had done the first, and proceeds to another bud. I have known it to attach four buds together in this way, thus making a case nearly two inches long. It pupates in its case, which it attaches to a leaf, and the imago emerges in Kentucky in the latter part of June.

BRENTHIA, Clem.

B. pavonacella Clem.

Not having seen Dr. Clemens' specimens, and being unable to recognize my bred specimens in any descriptions by him or any other author within my reach, I had proposed to describe this species as new under the name of *Microacthia amphicarpeana*, and specimens so labelled are in the cabinets of various Entomologists. Prof. Fernald, however, on comparison with Clemens' types, recognizes my specimens as identical therewith. I have no doubt this determination is correct, though having again examined Dr. Clemens' description, it seems to me singularly incomplete.

In the "Tineina of North America" (Mr. Stainton's republication of the Clemens' papers) p. 134, Mr. Stainton, who had seen Dr. Clemens' types, writes that it is "probably a *Simacthis*," and at p. 41, again, that he is disposed to consider the insect "not a *Tineina*, but one of the *Pyralidina* allied to *Simacthis*"; and on p. 38, Dr. Clemens states that having "examined a specimen of *Simacthis*, I must acknowledge that *Breuthia* seems congeneric with it"; but he thinks its proper location is among the *Tineina*, and not the *Pyralidina*. Zeller refers *pavonacella* Clem. to *Choreutis*, which is Stephens' section "A" of *Simacthis*. The species appears to me to have some decided affinities with the *Tineina*, but upon the whole to be rather referable to the *Tortricina*.

Dr. Clemens mentions that it has the habit of "strutting about on leaves," but Mr. Stainton "has never observed this habit in any of the English species." The appearance of the insect in repose is decidedly *strutty*, and full of self-importance. A human being who would make the same effort to display his or her adornment, would subject himself to a well-founded charge of egregious vanity, but perhaps the insect is no more

chargeable with vanity than is a peacock. I have, however, never seen it strut about on a leaf, and after having bred a great many specimens, I do not believe that it can walk or run. At all events, I have never seen it do either, its modes of progression being by flight or by little jumps. It sometimes jumps more than an inch at a time, that is, about six times its own length. It is the only insect that I can now call to remembrance which has the under side of the wings of both pair as gaily ornamented as the upper side, and which manages to make a full display of its entire ornamentation of body and wings at one and the same time. It does this in the following manner: The fore wings, without being laterally extended, are elevated so as to display anteriorly the ornamentation of their upper surface, and posteriorly that of their lower surface; at the same time the hind wings pass out beneath them at the side, and fully expanded, getting a twist at the base which brings the costal margin up and the dorsal margin down, so that the ornamentation of their upper surface is displayed in front, and that of their under surface behind. The under surface of the wings are rather more gaily ornamented than the upper. This is its position always in repose, and the ornamentation of the abdomen is also thus exposed. I have bred both ♂ and ♀, and observed no difference between them either in ornamentation or position.

The larva is very pretty. It is pearly white, prettily spotted with piceous, with the integument somewhat indurated. It attains a length of more than one-third of an inch. It feeds on the under surface of leaves of *Amphicarpaca monoica*, in a slight web by which the leaf is a little curved downward, and in this web it passes the pupa state concealed in a rather dense, flattened, lozenge-shaped cocoon. The larva is very common in Kentucky in June and July, and I have also found it in September. I have never met with the imago except when I have bred it, and my specimens emerged from their cocoons in the latter part of July.

TINEINA.

STROBISIA.

S. albaciliælla, n. sp.

I describe this species from a single specimen presented to me by Mr. Chas. Dury, of Cincinnati. Tongue, palpi and face white. Antennæ and vertex brown, with a bronze lustre and paler than the thorax and fore wings, which are shining blackish brown, with greenish, violet reflections;

apical ciliæ of fore wings white. Thorax above and the anal tuft bronzy brown, with a deep purplish lustre; under surface white. Legs white tinged with fuscous on their anterior surfaces, especially so at the apex of the tibiæ and on the tarsi. On the fore wings behind the middle are a very few white scales, forming an indistinct, short, transverse, white line. *Al. ex.* 5 lines. Taken at the light at Cincinnati, Ohio.

This and the three species described by Dr. Clemens are closely allied structurally and in ornamentation, and yet it is difficult to separate them structurally from the heterogenous assemblage of insects known as *Gelechia*.

ON A NEW ARCTIAN FROM FLORIDA.

BY A. R. GROTE, BUFFALO, N. Y.

The student is referred to my papers on the Bombycidæ of Cuba for remarks on a generic group closely allied to *Halisidota* (*Halesidota*) which I have called *Euhalisidota*, describing under it the species *luxa*, *fasciata*, *scripta* and *alternata*. Closely allied to the first of these is a species from Florida, the male of which I have from Mr. Schwarz, the female from Mr. Dury. It is hardly so large, and without the black thoracic marks, although I can make out two black points on the collar in one specimen. It seems to differ by the streak of dusky speckles about the median vein at the extremity of the cell, and the distinct subterminal series of isolated black dots. The color is dusky ochre, with the thorax darker and the inside of the fore tibiæ orange. The male antennæ are bipectinate. The secondaries are paler, with a slight apical mark in the male.

It must be remembered that my type from Cuba was a little rubbed. In comparing my figure and the present female specimen I think there is a great probability of the species being the same. The object of the present notice is to record the occurrence of the group in the United States, and to show that the West Indian fauna must be well understood before we describe, as new, species from the extremity of the Floridian peninsula.

Mr. Schwarz captured the male *Euhalisidota* at Enterprise, May 26, together with several other interesting moths, some of which I have already mentioned in this journal, and others I hope to be able to publish on a future occasion.